

vocera 

Now part of Stryker

To help retain and support nurses, fix communication

An examination of how communication challenges impact nurses' experience – and what nurse leaders can do about it

Survey: Communication in intensified environments is challenging

From July through October of 2021, Vocera, now part of Stryker, fielded a survey of nurses from across the globe. The goal was to learn about the burden associated with communication in intensified environments. We asked more than 500 nurses to recall a recent communication experience, describe it, and then rate it according to the NASA Task Load Index (TLX). The tool gauges the mental, physical, and temporal demand the communication task required, as well as the nurse's perception of performance, effort, and frustration levels. (See the *About this survey* section of this report for details.)

When we asked respondents to describe their communication scenario, almost two-thirds described some sort of communication challenge. These challenges ranged from lack of timely access to the right people or information, to interpersonal conflicts and failures of technology intended to simplify communication (see Figure 1). Only 17% said explicitly that communication was smooth and easy.

From the responses, we saw that as communication complexity rises, nurses' cognitive load, effort, and frustration increase along with it, while their perceived sense of performance dips. Equally troubling was the misalignment nurses described among care team members about how to communicate, and about a general sense of purpose.

Challenges emerged in the form of five strong themes. On the next couple of pages, we've summarized each and captured some of the scenarios nurses described. The themes:

- 1 **Communication delays increase frustration**
- 2 **Lack of resources fuels complexity**
- 3 **Interpersonal challenges make communication harder**
- 4 **Misalignment of purpose imposes barriers**
- 5 **Fragmented technology breeds broken communication**

Figure 1: Respondents described a range of communication challenges in open-ended responses.

| Issue* | Percent of total | Percent when presence/absence of issue was specified |
|---------------------------------|------------------|--|
| Not specified | 19% | – |
| None | 17% | 21% |
| Timeliness of communication | 20% | 25% |
| Access to right person | 16% | 19% |
| Availability of resources | 11% | 13% |
| Interpersonal/respect | 9% | 10% |
| Tech failure | 5% | 6% |
| Access to right info | 5% | 6% |
| Process complexity | 5% | 5% |
| Clarity | 4% | 5% |
| Failure to use tech | 4% | 4% |
| Interpersonal/clinical judgment | 4% | 4% |
| Alignment of purpose | 3% | 3% |
| Volume/complexity | 2% | 2% |
| Other | 2% | 2% |

*Some respondents cited multiple issues; the average number of issues for each respondent who cited issues was 1.4. For issue descriptions, see the *Detailed coding descriptions* section at the end of the report.

Communication in intensified environments is challenging (cont.)

1 Communication delays increase frustration

The most common issues respondents described related to making communication happen in a timely manner. They needed access to team members who held the information or process authority essential to patient care. However, they lacked clear processes and pathways to make it happen. As one respondent explained:

“I have to go to the intranet, find Amcom paging, locate the MD on the list, fill out text message, send and confirm it was sent, and then wait a couple of minutes and the MD calls me... I have to track the person down physically, often calling the main office to have them paged. They don’t always call back and need re-paging at times. Often, I get mixed up on which MD needs to sign what, as far as orders go.”

– Med/Surg RN

2 Lack of resources fuels complexity

Some nurses noted that their communication challenges were exacerbated by a lack of resources – especially low staffing or limited hours for essential services such as labs. Scenarios outlined by the nurses below reveal rising frustration levels:

“I was the only circulator to start the day when there should have been two. I had to leave the patient bedside to call for extra help, leaving the anesthesiologist to manage by herself. It felt awful.”

– Perioperative RN

“Unable to reach physician as he was in procedure. Unable to reach unit as clerk was on hour lunch. Unable to reach nursing as the nursing phone is shut off.”

– Perioperative RN

“Doctors are accessible in the ED, but lab is constantly overloaded... When trying to call it takes more time away from your patient care and leaves you feeling like you are in an endless waiting game.”

– ED APN

3 Interpersonal challenges make communication harder

Almost 10% of respondents cited challenges of disrespect in communication, and another 4% described conflicts around the clinical judgment of what was best for patient care. Sadly, most of these scenarios will look all too familiar to nurse leaders:

“We had a delay getting our first patient into the OR. The surgeon and the assistant both commented, in a belittling way, to staff that the patient should be in the room before this time. The comment was made to the nursing staff in the room who were not part of the delay. The delay was a result of anesthesia preop interview. However, the staff were never apologized to and it made the entire nursing team feel inadequate. These delays are a common occurrence and should not have a major impact, but the comments beat the nursing team down a little every time.”

– Perioperative RN

4 Misalignment of purpose imposes barriers

While the above conflicts arose from clashes in personality or knowledge, 3% of respondents cited a fundamental misalignment of purpose or shared goals at the root of their communication challenges:

“Handover of patient in holding bay that was totally unprepared. Escort nurse ... ‘not my responsibility, I am just the escort.’”

– Perioperative RN

“I had a frustrating experience trying to get an ICU bed for a patient that was unexpectedly staying intubated overnight. Bed control was not concerned with assisting us with obtaining the bed and this was frustrating because the patient needed a safe environment to stay overnight in. Holding the patient in the PACU was not optimal. Once we were able to get assistance from the manager of the main PACU that would have had to absorb our patient, the bed control nurse was much more accommodating. It is frustrating when we cannot work together for what is best for the patient without escalating to management.”

– Perioperative RN

Communication in intensified environments is challenging (cont.)

5 Fragmented technology breeds broken communication

Communication technology arose as either a potential boon or bane for our respondents. Many who said communication went smoothly cited the use of digital communication platforms (texting, email, pagers) or virtual tools (phones, video, hands-free audio) to facilitate connection. However, 5% of respondents cited challenges when technology failed (poor Wi-Fi, ineffective tools) and 4% said team members failed to use designated communication platforms:

“After working hours, it is difficult to communicate with the on-call doctors. Most of the time they will get annoyed whenever we call them to update about patient result or clarify some issue. We try to utilize the provider notification icon on the EMR. Unfortunately, it is not well utilized by doctors.”

– Perioperative RN

“Trying to get a hold of a surgeon STAT for a PPH. Was unable to get a hold of him on cell phone as there are numerous dead spots in the hospital; had to call several units to try to find him.”

– Perioperative RN

“I needed to message an anesthetist a patient’s blood results as his sodium was low. Couldn’t find the ward phone, paged the team, no one had it. Eventually we called it and found it under some notes. Texted the doctor. Got a response 10 minutes later.”

– Med/Surg RN

Challenging communication increases task load

Nurse leaders are likely unsurprised by any of the challenges cited by our survey respondents. But the data showing the impact of communication issues on nurses’ task load (see Figure 2) can help you build the case for change and prioritize where to focus your efforts. For that part of the analysis, we looked to the NASA TLX scores respondents reported based on the communication issue they described.

When respondents reported that they experienced no issue with communication, their average mental and physical demand scores were classified as medium (29 and 17 respectively) and their average temporal demand scores were somewhat high (36). In these instances, respondents reported on average a high level of performance (10) with medium effort (28) and frustration (17).

However, when respondents experienced any communication issue, their average mental and temporal demand scores increased from medium

(29 and 17, respectively) to high (63 and 65, respectively). The highest temporal demand came when information volume and complexity were high (79), and the highest mental demand occurred when participants in the communication were not aligned toward optimal patient care (76).

In addition, when nurses experienced any communication issue, their perceived performance decreased, and both effort and frustration increased. Effort rose from an average TLX score of 28 with no issue to an average of 69 across all issues. Average frustration scores rose from 17 for nurses with no communication issues to 75 across all issues for nurses who had communication issues. The highest levels of frustration and effort occurred when respondents perceived a lack of alignment of purpose (88 and 76, respectively) and when technology intended to improve communication ended up impeding it (83 and 73 respectively).

Key takeaways – building the case for change

When respondents experienced any communication issue, their average scores for mental and temporal demand, effort, and frustration increased.



The highest mental demand occurred when participants in the communication were not aligned toward optimal patient care.



The highest temporal demand came when information volume and complexity were high.



The highest levels of frustration and effort occurred when nurses perceived a lack of alignment of purpose and when technology impeded communication.

Figure 2: Respondents' average task load scores are based on issue(s) reported.

| Coded issue | Count | Mental Demand | Physical Demand | Temporal Demand | Performance | Effort | Frustration |
|---------------------------------|------------|---------------|-----------------|-----------------|-------------|-----------|-------------|
| None | 88 | 29 | 17 | 36 | 10 | 28 | 17 |
| Timeliness of communication | 101 | 58 | 27 | 58 | 37 | 63 | 69 |
| Access to right person | 83 | 61 | 29 | 71 | 35 | 72 | 71 |
| Resources | 57 | 58 | 24 | 58 | 39 | 64 | 72 |
| Interpersonal/respect | 47 | 67 | 23 | 63 | 39 | 60 | 79 |
| Tech failure | 28 | 62 | 26 | 70 | 41 | 73 | 83 |
| Access to right info | 27 | 51 | 24 | 55 | 33 | 64 | 61 |
| Process complexity | 24 | 50 | 20 | 67 | 26 | 62 | 64 |
| Clarity | 23 | 63 | 28 | 64 | 34 | 71 | 72 |
| Failure to use tech | 19 | 65 | 23 | 66 | 43 | 64 | 76 |
| Interpersonal/clinical judgment | 18 | 67 | 36 | 57 | 44 | 74 | 78 |
| Alignment of purpose | 17 | 76 | 31 | 68 | 52 | 76 | 88 |
| Volume/complexity | 10 | 69 | 17 | 79 | 36 | 78 | 79 |
| Other | 10 | 55 | 13 | 53 | 27 | 61 | 59 |
| Average for all issues | 326 | 63 | 26 | 65 | 40 | 69 | 75 |
| Not specified | 99 | 49 | 26 | 52 | 26 | 52 | 45 |
| Overall | 513 | 54 | 25 | 58 | 32 | 58 | 59 |

Legend

| | |
|--|---------------|
| | Low |
| | Med |
| | Somewhat high |
| | High |
| | Very high |

Scoring: low (0-9), med (10-29), somewhat high (30-49), high (50-79), very high (80-100).¹

1. Prabaswari, Atyanti D., et al. "The Interpretation Score of NASA TLX." ResearchGate, Jun 2019. https://www.researchgate.net/figure/The-Interpretation-Score-of-NASA-TLX-8_tbl1_333730333

The legend includes a color for "low," even though none of the average task load scores were in the low range.

Nurse leaders are positioned to lead the charge for unified communication

Too often, nurses and nurse leaders have viewed the challenges described by our survey respondents as just part of the job. Nurses have mastered workarounds, making do with whatever tools were supplied to them. It's not uncommon for nurses to absorb disrespect in the name of teamwork and hierarchy. They take on the burden of under-resourced departments through their time and their mental effort.

Nurses are positioned as the hub of the communication that makes care coordination possible. However, the workflow and interpersonal complexities revealed in our survey are common when communication isn't positioned as a disciplined strategy, supported by technology, that can unify teams and foster collaboration.

The cognitive overload, effort, and frustration of broken communication often lead to errors, frustration, and feelings of abandonment or burnout. Nurses are opting out and leaving the profession because they're being asked to work through complexity that could be avoided if leaders would invest the time and funds to provide effective technology solutions.

Invest in a unified communication and collaboration platform

To support nurses' safety and well-being, nurse leaders should champion a unified communication platform and protocols that align all care team members. Frontline nurses should be able to reach the person by role or name who has the information or authority they need to advance patient care, without looking up numbers. They

should be able to easily access the information they need from systems to inform decision making. They should be empowered with effective tools and protocols to manage communication with patients' family members.

The nurse's communication device should provide a real-time view of which physicians are on call or unavailable. The nurse should have the choice of using a smartphone or a hands-free wearable device that enables voice communication without disrupting patient care workflow.

Too often, solutions are introduced in terms of end points and tactical problems. For example, "we need secure texting," or, "we bought 1,000 smartphones and now we need software." This approach leads to deploying disparate and disconnected systems without determining communication needs holistically. Nurses, physicians, and ancillary team members end up using disparate communication tools. Systems and protocols often vary from unit to unit, and little is integrated or interconnected.

Create communication standards to manage interpersonal conflict

Every leader knows that some degree of interpersonal conflict is inevitable. But they also know that it's more likely to happen when people are frustrated, stressed, and under-resourced. Reducing the effort and frustration of cross-team communication creates emotional and cognitive capacity for collaborative problem-solving. Making it easy for nurses, doctors, and other care team members to perform basic care protocols frees up their creativity and energy for the more challenging and rewarding aspects of care.

A standardized communication platform for the entire care team sends a powerful message that "we're all on the same team." With that foundational message, nurse leaders can work with their clinical leadership counterparts to define, train, and reward interdisciplinary teamwork and build a culture of respectful communication and collaboration – one in which all team members are aligned around delivering an exceptional care experience to patients and their loved ones.

Involve frontline nurses in selecting communication technology

The nurses in our survey conveyed loudly and clearly that communication technology isn't helpful if it doesn't streamline or enhance workflow. The best solutions result when nurse leaders and informatics leaders work together with frontline team members to source and refine solutions that solve the daily communication challenges. They ask nurses directly: What frustrates you? What communication tasks take too much effort? What kinds of tools would reduce your cognitive load?

Nurse leaders are positioned to lead the charge for unified communication (cont.)

Nurse leaders have an opportunity to redefine the role of nurses in the clinical communication model. They must enable nurses to focus on delivering care in a way that makes nurses feel safe and fosters their continued commitment to and satisfaction within the nursing profession. Nurses need to be empowered as the center of a strong, efficient system of clinical collaboration, and equipped with the tools that make communication seamless.

From communication chaos to clinical collaboration

Nurses' anecdotes in our survey described recurring themes of page-and-wait frustrations, searches for call sheets, lack of respect and shared purpose, and other hallmarks of difficult communication.

Each comment made in this survey reflects a single encounter during a single shift for the 513 nurses who responded. The types of encounters these nurses described are repeated hundreds of thousands of times every day in hospitals around the world. It's staggering to consider the magnitude of the problem.

But we are also hopeful. As Rhonda Collins, DNP, RN, FAAN, former Chief Nursing Officer at Vocera, wrote in

the CNO Perspective report *Reimagining Nursing for the Future*, "If the pandemic has brought about one positive thing, it is the freedom nurses have gained to insist that we focus on solving deeply complex problems. Nurse leaders are finding the courage to listen to nurses and make sweeping changes, one workflow at a time."

Nurses are counting on their nurse leaders to make these changes. With every early retirement, every new graduate who seeks a new job after less than a year, and every nurse who is no longer willing to work at the bedside, the message is clear: They're saying that they need to see action now.

Every nurse, every doctor, every tech, every patient, and every family member deserves an effective and reliable communication experience.

About this survey

Demographics

A total of 513 nurses responded to our survey. Of these, 93% hold RN licenses, 6% are advanced-practice nurses, and 1% are LPNs or LVNs.

Thirty-six percent of respondents work in medical/surgical units, 17% in mental health, 16% in perioperative areas, 13% in the emergency department, 12% in intensive care units, and 7% in labor and delivery. Four percent specified that they work in community clinics, home care, long-term care, or public health, though we did not explicitly ask about those designations.

We received responses from 14 countries, with the majority coming from North America. Location is based on the IP address from which the survey was completed, and geographic distribution breaks down as follows:

| | |
|--------------------|-----|
| USA..... | 41% |
| Canada | 24% |
| ANZ..... | 22% |
| UK + Ireland | 3% |
| ME..... | 9% |
| Other | 1% |

Methodology

Our survey was fielded from July through October of 2021. We invited nurses via social media and email outreach to nurse leaders. Survey participants were encouraged to forward the survey link to fellow nurses. There was no honorarium or other incentive offered to respondents. All responses were collected anonymously.

In the survey, we asked nurses to "Recall a communication experience during your most recent shift (for example, trying to reach a physician or obtain a lab result). Please describe the experience." We coded those open-ended responses to categorize them by the communication format (in person, virtual, digital, etc.), as well as whether the respondents described a problem with communication and, if so, what type of problem.

About this survey (cont.)

We asked respondents to rate that communication task's mental demand, physical demand, and temporal demand, as well as their performance, effort, and frustration, using the validated NASA TLX survey questions (see full question set below). We then compared average TLX ratings for the different types of issues described.

About the NASA TLX

The NASA TLX has been used to measure the task load of workers in high-intensity jobs, such as pilots and air traffic controllers. It's been used to measure the task load of ICU nurses, and this survey was the first time it was used to measure the task load involved in clinical communication.

Survey questions:

1. Recall a communication experience during your most recent shift (for example, trying to reach a physician or obtain a lab result). Please describe the experience below.
2. How mentally demanding was the task? [0=very low – 100=very high]
3. How physically demanding was the task? [0=very low – 100=very high]
4. How hurried or rushed was the pace of the task? [0=very low – 100=very high]

5. How successful were you in accomplishing what you were asked to do? [0=perfect – 100=failure]
6. How hard did you have to work to accomplish your level of performance? [0=very low – 100=very high]

7. How insecure, discouraged, irritated, stressed, and annoyed were you? [0=very low – 100=very high]

We also asked demographic questions about licensure and department.

Detailed coding descriptions

| Issue | Description |
|---------------------------------|--|
| Not specified | It was not clear based on the description if there was an issue or not |
| None | Respondent said communication had no issue |
| Timeliness of communication | Difficulty accessing person or information quickly enough |
| Access to right person | Difficulty accessing person needed (e.g., doctor, anesthesiologist), usually due to lack of availability (e.g., in the OR) |
| Access to right info | Difficulty accessing information necessary to complete task |
| Availability of resources | Not enough staff or material resources |
| Interpersonal/respect | Disrespect in communication |
| Interpersonal/clinical judgment | Disagreement over patient's clinical needs |
| Technology failure | Technology failed to work as intended (e.g., app failed, no cell phone coverage). Does NOT include human failure to use technology or respond in a timely manner |
| Failure to use technology | Technology available, but people don't use correctly; or some stakeholders do not use the standard tech |
| Volume/complexity | Too much information to manage, or information is highly complex |
| Process complexity | Defined process is complex or encumbered |
| Clarity | Failure to communicate clearly to all parties (includes clarity in PPE) |
| Alignment of purpose | Leadership and/or team members are not working toward shared goals, or are unclear about who is responsible for decision-making |
| Other | Other issue |



Now part of Stryker

About Vocera

Vocera, now part of Stryker, provides clinical communication and workflow solutions that help protect and connect team members, increase operational efficiency, enhance quality of care and safety, and humanize the healthcare experience. Nearly 2,800 facilities worldwide, including more than 2,300 hospitals and healthcare facilities, have selected Vocera solutions to enable their workforce to communicate and collaborate, and engage with patients and families. Our platform can integrate with most clinical and operational systems used in hospitals. Mobile workers can choose the right device for their role and workflow, including smartphones or

our wearable, hands-free communication devices, and use voice commands to easily reach people by name, role, or group. For more information, visit [Vocera.com](https://www.vocera.com).

Stryker is one of the world's leading medical technology companies and, together with our customers, we are driven to make healthcare better. We offer innovative products and services in Medical and Surgical, Neurotechnology, Orthopaedics, and Spine that help improve patient and hospital outcomes. For more information, visit [Stryker.com](https://www.stryker.com).

Learn more at www.vocera.com/nasa-tlx-nurse-communication.

Contact us:

US/Canada: 1-(888)-986-2372

UK: 0 (800) 652-8773

UAE: 800-0182438

Australia: 1 300 862-372

New Zealand: 0800 446 149